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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/761,354	01/22/2004	Michiaki Sakamoto	NEC01P012-JTb	3258
21254	7590	03/07/2006	EXAMINER	
MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			TON, MINH TOAN T	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/761,354

Applicant(s)

SAKAMOTO ET AL.

Examiner

Toan Ton

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Election/Restriction

1. An election without traverse of species I directing to claims 9-10 is acknowledged. Thus, claims 1-6, 9-13 and 18 are being examined, and claims 14-17 and 19-20 are withdrawn from consideration.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiji et al (JP 6-273802, IDS).

Hiji discloses an active-matrix liquid crystal display (LCD) device comprising: a first substrate 1'; a second substrate 2' disposed in opposing relation to the first substrate; a liquid crystal layer 3 sandwiched between the first substrate and the second substrate; an overcoating layer 18 disposed on the first substrate; a plurality of pixel electrodes 7 arranged in a matrix on the first substrate and on the overcoat layer; a plurality of switching elements disposed on the first substrate in association with the pixel electrodes, respectively, for driving the pixel electrodes, respectively; a plurality of data lines 4 disposed on the first substrate at respective gaps between adjacent two of the pixel electrodes, for supplying data signals to the switching elements; and a black matrix 11 disposed on the first substrate in association with the data lines, for blocking light passing in a predetermined viewing angle range through a light leakage region

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created in the liquid crystal layer depending on a potential difference between adjacent two of the pixel electrodes.

Hiji discloses in page 2, paragraph [8] to paragraph [10]: the conventional active-matrix LCD device, in a non-selection period, the potential difference may be produced between the pixel electrode and a signal/scanning line, and a longitudinal direction electric field may occur at the periphery of the pixel electrode → the reverse tilt field comprises the problem of reducing the contrast of the display. Hiji solves the problem by employing a black matrix covering the portion where the reverse tilt field occurs.

4. Claims 2, 5, 12, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiji as applied to claims 1, 4, 11 above.

Hiji fails to disclose color filters. However, the use of color filters on either substrate is common and known for providing a color display device. Therefore, it would have been obvious to one of ordinary skill in the art to employ color filters on the first substrate, as common and known for providing a color display device.

5. Claims 3, 6, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiji as applied to claims 2, 5, 12, 18 above, and further in view of Sato et al (US 5718992, IDS).

Hiji fails to disclose the black matrix made of electrically insulating material.

Metal is a common and known material for a black matrix, however, the use of metal yields several problems such as pinholes, high light reflectance that leads to inferior viewing properties, low quality color display device (see col. 2, lines 6-19 of Sato). These problems are

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overcome through the use of resin composition admixed with black pigments (see col. 2, lines 20-22 of Sato). Therefore, it would have been obvious to one of ordinary skill in the art to employ an electrically insulating material such as resin composition admixed with black pigments for preventing problems such as pinholes, high light reflectance that leads to inferior viewing properties, low quality color display device.

Allowable Subject Matter

6. Claims 9-10 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not anticipate nor render obvious to one ordinary skilled in the art an active matrix liquid crystal display device comprising a combination of various elements as claimed, more specifically, the black matrix having a portion overlapping the pixel electrodes, the portion having a width W represented by $W \geq d_{LC}/4 + d_{oc} \cdot \tan\theta$, where d_{LC} represents a thickness of the liquid crystal layer, d_{oc} represents a thickness of the overcoat layer on the black matrix, and θ represents one-half of a given viewing angle 2θ .

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


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Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 2, 2006


TOAN TON
PRIMARY EXAMINER